

ABSTRACT OF THE DISCLOSURE

A method and apparatus to dynamically modify the internal compensation of a low drop-out (LDO) linear voltage regulator is presented. The process involves creating an additional equivalent series resistance (ESR) from an internal circuit. The additional ESR of the internal circuit is sufficient to ensure DC output stability. This allows the ESR of the output capacitance to be reduced to zero if desired, for improved transient response. The zero induced by the ESR of the internal circuit is frequency compensated, so that it tracks the position of the output pole as the load varies.